

### AMENDMENTS TO THE CLAIMS

Claims 1-11 (Cancelled).

11. (Currently Amended) A method for screening for a modulator of Alzheimer's disease, wherein said modulator modulates ~~either~~

~~(i) a gene coding for a cytosolic sulfotransferase family 4A member 1~~ at least one protein molecule selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2, said protein molecule being a translation product of the gene coding for a cytosolic sulfotransferase family 4A member 1,

~~(ii) a transcription product of a gene coding for a cytosolic sulfotransferase family 4A member 1,~~

~~(iii) a translation product of a gene coding for a cytosolic sulfotransferase family 4A member 1, and/or~~

~~(iv) a fragment or variant of (i) to (iii),~~

said method comprising: (a) contacting ~~a~~ an isolated cell over-expressing a SULT4A1 protein with a test compound; (b) measuring the activity and/or level of one or more substances recited in (i) ~~to (iv)~~ (c) measuring the activity and/or level of one or more substances recited in (i) ~~to (iv)~~ in a control cell not contacted with said test compound; and (d) comparing the levels and/or activities of the substance in the cells of step (b) and (c), wherein an alteration in the activity and/or level of substances in the contacted cells indicates that the test compound is a modulator of said Alzheimer's disease.

12. (Currently Amended) A method of screening for a modulator of Alzheimer's disease, wherein said modulator modulates ~~either~~

~~(i) a gene coding for a cytosolic sulfotransferase family 4A member 1~~ at least one protein molecule selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:2, said

protein molecule being a translation product of the gene coding for a cytosolic sulfotransferase family 4A member 1,

~~(ii) a transcription product of a gene coding for a cytosolic sulfotransferase family 4A member 1,~~

~~(iii) a translation product of a gene coding for a cytosolic sulfotransferase family 4A member 1, and/or~~

~~(iv) a fragment or variant of (i) to (iii),~~

said method comprising: (a) administering a test compound to a ~~test animal~~ SULT4A1 transgenic or gene disrupted mouse or *Drosophila* which is predisposed to developing or has already developed symptoms of Alzheimer's disease in respect of the substances recited in (i) ~~to (iv)~~, wherein said animal and a matched control animal are altered to expresses the gene coding for a cytosolic sulfotransferase family 4A member 1, under the control of a transcriptional control element which is not the native cytosolic sulfotransferase family 4A member 1 gene transcriptional control element; (b) measuring the activity and/or level of one or more substances recited in (i) ~~to (iv)~~; (c) measuring the activity and/or level of one or more substances recited in (i) ~~or (iv)~~ in [[a]] the matched control animal which is predisposed to developing or has already developed symptoms of Alzheimer's disease in respect to the substances recited in (i) ~~to (iv)~~ and to which animal no such test compound has been administered; (d) comparing the activity and/or level of the substance in the animals of step (b) and (c), wherein an alteration in the activity and/or level of substances in the test animal indicates that the test compound is a modulator of said Alzheimer's disease.

Claims 13-30 (Cancelled).